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| CLARK, MAXWELL A   |             |                      |                     |                  |
| ART UNIT   |             | PAPER NUMBER         |                     |                  |
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**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

### Office Action Summary

**Application No.**

10/821,181

**Applicant(s)**

FORTMAN, PETER A.

**Examiner**

MAXWELL A. CLARK

**Art Unit**

4183

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 09 April 2004.  
2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.  
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-27 is/are pending in the application.  
4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.  
5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.  
6) ☒ Claim(s) 1-27 is/are rejected.  
7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.  
8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☒ The specification is objected to by the Examiner.  
10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☒ All b) ☐ Some \* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)  
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)  
3) ☒ Information Disclosure Statement(s) (PTO/SI/309)  
Paper No(s)/Mail Date 09/02/2004  
4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_  
5) ☐ Notice of Informal Patent Application  
6) ☐ Other: \_\_\_\_\_

## **DETAILED ACTION**

### ***Specification Objections***

1. The abstract of the disclosure is objected to because the purpose of the abstract is to enable the United States Patent and Trademark Office and the public generally to determine quickly from a cursory inspection the nature and gist of the technical disclosure. Correction is required. See MPEP § 608.01(b).
2. The disclosure is objected to because of the following informalities: "online service 210" should be changed to "'LNS" or "L2TP Network" Server 210" to be consistent with the figure 3 illustration labels (page 7, lines 15, 18 and 20).

Appropriate correction is required.

### ***Claim Rejections - 35 USC § 101***

3. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claims 12 and 18 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter. Propagated signals are non-statutory subject matter.

### ***Claim Rejections - 35 USC § 112***

4. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

5. Claims 9 and 11 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. The specification does not disclose a service configured to automatically correct a network fault; disclosed is notification to a repair service in the event of a fault (specification, page 8, line 31; page 9, line 1-2).

6. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

7. Claims 20 and 22 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The claims recite "wherein the first communication session logically is nearer the online service than the second communications session", it is unclear as to what "logically is nearer" is referring to. In communication systems this could have a several meaning, for example "logically nearer" may mean physically or time based.

#### ***Claim Rejections - 35 USC § 102***

8. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

9. Claims 1-8, 12-18, 20 and 22-27 are rejected under 35 U.S.C. 102(e) as being anticipated by Franklin et al (US 7,092,364 B1).
10. Regarding claim 1 Franklin discloses a modem session [access session (column 5, line 39)] endpoint configured as a conduit [OSI model layer 2/3 communication element (column 5, lines 40-41)] for active modem communications involving a user and configured to determine diagnostic information related to the active modem communications, an active modem communications including information directed to an online service (column 9, lines 34-40), a tunneling protocol including a diagnostic information message format (column 7, lines 1-6), and a gateway configured to communicate the diagnostic information with the modem session endpoint and to communicate the diagnostic information to the online service using the diagnostic information message format of the tunneling protocol [PPP, PPPoE, PPPoA, PPTP, SMDS, SIP (column 6, lines 20-24; column 7, lines 1-6) via the PVCs (column 6, line 27)].
11. Regarding claim 2 Franklin discloses a gateway comprising an access concentrator [L2TP (column 6, line 44)].
12. Regarding claim 3 Franklin discloses a gateway further comprising an access multiplexer [DSLAM (column 2, line 44)].

13. Regarding claim 4 Franklin discloses a tunneling protocol comprising a layer 2 tunnel protocol (column 7, lines 1-6).
14. Regarding claim 5 Franklin discloses a tunneling protocol comprising a point-to-point tunneling protocol (column 6, line 20).
15. Regarding claim 6 Franklin discloses a maintenance mechanism (column 8, lines 59-67) configured to use the diagnostic information automatically to detect and diagnose a communication fault [failure (column 10, lines 10-13)].
16. Regarding claim 7 Franklin discloses a maintenance mechanism that is configured further to detect and to diagnose the communication fault based on additional diagnostic information related to active modem communications of other users (column 10, lines 15-19).
17. Regarding claim 8 Franklin discloses a communication service configured to use one or more tunneling protocols (column 7, lines 1-6) to receive diagnostic information related to active modem communications of each of a plurality of users and a diagnostic service configured to aggregate the diagnostic information (column 2, lines 60-61) and to detect and to diagnose a network fault automatically [failure (column 10, lines 10-13; column 10, lines 49-51)] based on the aggregated diagnostic information (column 10, lines 31-33).
18. Regarding claim 12 Franklin discloses a modem code segment that causes a modem to communicate an active modem communication, wherein the active modem communication includes information directed to an online service (column 9, lines 12-15; column 9, lines 21-24), a tunnel code segment that causes a computer of the online

service to communicate using a tunneling protocol (column 9, lines 12-15; column 9, lines 21-24; column 9, lines 50-54) and a gateway code segment that causes a gateway computer [EMS] to communicate with the modem (column 9, lines 12-15; column 9, lines 21-24; column 9, lines 58-64), determine diagnostic information related to the active modem communication (column 9, lines 12-15; column 9, lines 21-24; column 9, lines 65-67; column 10, lines 1-9), and communicate with the computer of the online service to provide the diagnostic information to the computer of the online service (column 9, lines 12-15; column 9, lines 21-24; column 10, lines 10-21; column 10, lines 58-67).

19. Regarding claim 13 Franklin discloses a tunnel code segment further comprises an L2TP code segment that causes the computer of the online service to communicate using a layer 2 tunnel protocol via the PVC (column 9, lines 50-53; column 7, lines 7-8).

20. Regarding claim 14 Franklin discloses a tunnel code segment further comprises a PPTP code segment that causes the computer of the online service to communicate using a point-to-point tunneling protocol via the PVC, (column 6, lines 52-60; column 9, lines 50-53).

21. Regarding claim 15 Franklin discloses a tunnel code segment further comprises an L2F code segment that causes the computer of the online service to communicate using layer 2 forwarding via the PVC (column 8, lines 28-37; column 9, lines 50-53).

22. Regarding claim 16 Franklin discloses a maintenance code segment that causes the computer of the online service to use the diagnostic information to detect and to

diagnose a network fault (column 9, lines 12-15; column 9, lines 21-24; column 10, lines 10-12; column 10, lines 58-67).

23. Regarding claim 17 Franklin discloses maintenance code segment further causes the computer of the online service to detect and to diagnose the network fault based on additional diagnostic information related to active modem communications of other users [aggregated provisioning information (column 9, lines 12-15; column 9, lines 21-24; column 10, lines 31-33).

24. Regarding claim 18 Franklin discloses communication code segments that causes a computer to use one or more tunneling protocols to receive diagnostic information related to active modem communications of each of a plurality of users(column 9, lines 12-15; column 9, lines 21-24; column 9, lines 65-67; column 10, lines 1-9), and a diagnostic code segment that causes the computer to aggregate the diagnostic information and to detect and to diagnose a network fault automatically based on the aggregated diagnostic information(column 10, lines 10-39, column 10 lines 58-67).

25. Regarding claim 20 Franklin discloses configuring the online service to communicate with a plurality of modems using a plurality of access sessions, each access session comprising a first communication session and a second communication session, wherein the first communication session logically is nearer the online service than the second communication session(column 6, lines 13-67), configuring the online service to use the first communication sessions to communicate diagnostic information related to the second communication session (column 7, lines 63-67; column 8, lines 1-



13), and configuring the online service to use the diagnostic information to diagnose a communication fault without human intervention(column 9, lines 34-40).

26. Regarding claim 22 Franklin discloses configuring the online service to communicate with a user computer using an access session that comprises a first communication session and a second communication session, wherein the first communication session logically is nearer the online service than the second communication session(column 6, lines 13-67), determining diagnostic information related to the second communication session, and configuring the online service to use the first communication session to communicate diagnostic information determined relative to the second communication session (column 7, lines 63-67; column 8, lines 1-13).

27. Regarding claim 23 Franklin discloses a communication session that logically connects a gateway service and an online service, and a second communication session that logically connects the gateway service and a networked device (column 5, lines 35-48).

28. Regarding claim 24 Franklin discloses a network session and the second communication session comprising of an active modem session (column 5, lines 48-59).

29. Regarding claim 25 and 26 Franklin discloses a tunneling protocol with a diagnostic message, and wherein the first communication session is configured to use the diagnostic information message of the tunneling protocol to communicate the diagnostic information (column 5, lines 35-48) and the second communication session includes an active modem session(column 5, lines 48-59).

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30. Regarding claim 27 Franklin discloses a computer to diagnose a communication fault based on the diagnostic information without human intervention (column 10, lines 47-51).

***Claim Rejections - 35 USC § 103***

31. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

32. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

33. Claims 9-11, 19 and 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Franklin et al (US 7,092,364 B1) in view of Barsheshet (US 20030043738 A1).

Franklin discloses the elements of claims above but does not specifically disclose circumventing network failures.

However, Barsheshet discloses the use of MPLS networking functions for the purpose of avoiding network paths where faults occur essentially circumventing the network failure location (see in particular paragraph [0026]).

It would have been obvious to one of ordinary skill in the art at the time the application was filed to modify the invention disclosed by Franklin to include MPLS network functionally, as taught by Barsheshet, in order to achieve re-rerouting solutions when the diagnosis system discovered routes that were faulty or inefficient.

### ***Conclusion***

34. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Bahl et al., Ogawa et al., Hershey et al., Burak, Belousov et al., Yamada, Pitroda et al., Faulk et al., Palmer, Burns et al., Taylor et al., Faigon et al., Morton et al., Elliott et al., Oguchi et al., Bowcutt et al., Eldumati et al..

Any inquiry concerning this communication or earlier communications from the examiner should be directed to MAXWELL A. CLARK whose telephone number is (571)270-1956. The examiner can normally be reached on Monday to Thursday 7:30A.M. to 5P.M. EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Len Tran can be reached on (571) 272-1184. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

January 9<sup>th</sup>, 2008

/Maxwell A. Clark/  
Examiner, Art Unit 4183

/Len Tran/  
Supervisory Patent Examiner, Art Unit 4183